



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

**Notice to Reader.**—When you finish reading this magazine, place a 1 cent stamp on this notice, mail the magazine, and it will be placed in the hands of our soldiers or sailors destined to proceed overseas. No wrapping—No Address. **A. S. Burleson, Postmaster-General.**

Vol. 7, No. 5

NOVEMBER, 1918

# THE SCIENTIFIC MONTHLY

## CONTENTS

SOCIAL CONDITIONS IN THE PIURA-TUMBES REGION OF NORTHERN PERU. PHILIP AINSWORTH MEANS . . . . .	385
THE RATIONALE OF TESTING INTELLIGENCE, WITH SPECIAL REFERENCE TO TESTING IN THE ARMY. CAPTAIN DANIEL W. LA RUE . . . . .	400
THIS GENERATION CAN NOT ESCAPE PAYING THE COST OF WAR. PROFESSOR C. C. ARBUTHNOT . . . . .	413
THE ETHICAL VALUE OF SCIENCE. PROFESSOR E. P. LEWIS . . . . .	435
THE PRINCIPLES OF EDUCATION. DR. P. G. NUTTING . . . . .	448
MINERALS AND POWER. PROFESSOR F. E. WILLIAMS . . . . .	457
MEDICAL LABORATORIES. DR. ELLIS KELLERT . . . . .	465
THE PROGRESS OF SCIENCE: Grove Karl Gilbert; The University of Paris; The Chemical Warfare Service; Scientific Items . . . . .	474

## THE SCIENCE PRESS

LANCASTER, PA. GARRISON, N. Y.  
NEW YORK: SUB-STATION 84

SINGLE NUMBER, 30 CENTS YEARLY SUBSCRIPTION, \$3.00

COPYRIGHT 1917 BY THE SCIENCE PRESS

# A Remarkable Textbook

---

## *Barber's First Course in General Science*

By FREDERICK D. BARBER, Professor of Physics in the Illinois State Normal University, MERTON L. FULLER, Lecturer on Meteorology in the Bradley Polytechnic Institute, JOHN L. PRIGER, Professor of Biology in the Illinois State Normal University, and HOWARD W. ADAMS, Professor of Chemistry in the same. vii+588 pp. of text. 12mo. \$1.25.

A recent notable endorsement of this book occurred in Minneapolis. A Committee on General Science, representing each High School in the city, was asked to outline a course in Science for first year High School. After making the outline they considered the textbook situation. In this regard, the Committee reports as follows:

"We feel that, in Science, a book for first year High School use should be simple in language, should begin without presupposing too much knowledge on the part of the student, should have an abundance of good pictures and plenty of material to choose from.

*Barber's First Course in General Science* seems to us to best meet these requirements and in addition it suggests materials for home experiments requiring no unusual apparatus, and requires no scientific measurements during the course. We recommend its adoption."

### Other Interesting Opinions on the Book Follow:

SCHOOL SCIENCE AND MATHEMATICS:—It is one of the very best books on general science that have ever been published. The biological as well as the physical side of the subject is treated with great fairness. There is more material in the text than can be well used in one year's work on the subject. This is, however, a good fault, as it gives the instructor a wide range of subjects. The book is written in a style which will at once command not only the attention of the teacher, but that of the pupil as well. It is interesting from cover to cover. Many new and ingenious features are presented. The drawings and halftones have been selected for the purpose of illustrating points in the text, as well as for the purpose of attracting the pupil and holding his attention. There are 375 of these illustrations. There is no end to the good things which might be said concerning this volume, and the advice of the writer to any school board about to adopt a text in general science is to become thoroughly familiar with this book before making a final decision.

WALTER BARR, *Keokuk, Iowa*:—Today when I showed Barber's Science to the manager and department heads of the Mississippi River Power Co., including probably the best engineers of America possible to assemble accidentally as a group, the exclamation around the table was: "If we only could have had a book like this when we were in school." Something similar in my own mind caused me to determine to give the book to my own son altho he is in only the eighth grade.

G. M. WILSON, *Iowa State College*:—I have not been particularly favorable to the general science idea, but I am satisfied now that this was due to the kind of texts which came to my attention and the way it happened to be handled in places where I had knowledge of its teaching. I am satisfied that Professor Barber, in this volume, has the work started on the right idea. It is meant to be useful, practical material closely connected with explanation of every day affairs. It seems to me an unusual contribution along this line. It will mean, of course, that others will follow, and that we may hope to have general science work put on such a practical basis that it will win a permanent place in the schools.

---

## Henry Holt and Company

NEW YORK

BOSTON

CHICAGO

**"Who opposes me I will crush to pieces!"—William II, Emperor of Germany**

# **A Survey of International Relations Between the United States and Germany**

**August 1, 1914—April 6, 1917**

(BASED ON OFFICIAL DOCUMENTS)

**By JAMES BROWN SCOTT**

*Doctor of Jurisprudence of the University of Heidelberg; President of the American  
Institute of International Law; Major and Judge Advocate, United States Reserves*

## **REVIEWS**

"One of the really great books thus far produced about the war. . . . A record which, if all other books in the world were to be destroyed, would itself alone be an abundant condemnation of Germany and an abundant vindication of our present course in warring against the Hun. Whatever else we may or may not read about the war, its antecedents and its causes, this is a volume which no one desiring the fullest information on the best authority can well afford to miss. The nation is greatly the debtor of Dr. Scott for his having written it."—*New York Tribune*.

"The most comprehensive, thorough, and systematic presentation of German-American relations since the outbreak of the war that has yet appeared. . . ."

—*N. Y. Evening Post*.

"It is the most damning array of evidence yet adduced. . . . We have in this exhaustive survey a complete reference work for all Americans who wish to have at hand a compact statement of German aims and the methods of attaining those aims."

—*Philadelphia Bulletin*.

" . . . No writer has ever contrasted with more force the viewpoint of the Prussian autocrat with the principles of the American democrat. One is a better and prouder American for having read this book."

—*Philadelphia Press*.

"The most powerful and interesting presentation of the legal case of the United States against Germany which has yet appeared. The first chapter, entitled 'The Genesis of the War of 1914,' is as interesting as a novel. James Brown Scott has written a most informing book. It tells the story of how and why we have gone into the war better than it has yet been told by anybody else. The author is a scholar without pedantry; a historian gifted with imagination; a broad-minded lawyer, unfettered by technicalities. This volume is as readily comprehensible by laymen as by professional readers; and to both classes it will prove an invaluable book of reference concerning the events leading up to the participation of the United States in the greatest war in history."

—*N. Y. Sun*.

*Royal 8vo, Cloth, pp. cxvi+390. Net \$5.00*

*At all Booksellers or from the Publishers*



**Oxford University Press American Branch**

**35 West 32d Street, New York**



An Important Contribution to the Literature of Science

# A Short History of Science

BY

W. T. SEDGWICK,

Professor of Biology

H. W. TYLER,

Professor of Mathematics

at the Massachusetts Institute of Technology

The history of science is as engrossing as the history of Greece and Rome and gives as sure an indication of the growth of civilization as does the history of philosophy, art, literature, or music.

The literature of science has always been more or less technical both in the subject matter and the form of its presentation, and Professors Sedgwick and Tyler have rendered a great service to the lay reader as well as to the student in writing a history of the development of science from its remotest period, through the romance of Mediaeval astrology and alchemy to the tremendous achievements of the last centuries.

"A Short History of Science" is one of the first books of its kind in English and is the result of the authors' many years of joint teaching of the subject. It is a book which will prove of the greatest value to Universities, Colleges, Scientific and Technical schools, and is especially adapted to general reading and reference.

With Appendices and Illustrations. Cloth, 8vo, \$2.50

---

THE MACMILLAN COMPANY

PUBLISHERS

NEW YORK

# Books for Military Courses

*Prepared and issued under the Auspices of the National Research Council,  
Division of Geology and Geography.*

These books are especially designed to meet the needs of Student Army Training Corps.

## **Military Geology and Topography**

Edited by HERBERT E. GREGORY, Ph.D.

The war has demonstrated the high value of a knowledge of geology including the reading and interpretation of maps as applied to military problems and called attention to this subject as an essential part of elementary military training. The Committee on Education and Special Training of the War Department has included military geology in the list of subjects recommended for study in all institutions which enroll army training units. Many prominent geologists have collaborated in preparing the present volume for this purpose.

*6x9, cloth finish boards, 300 pages, 117 illustrations and maps, \$1.25.*

## **Introductory Meteorology**

By exclusion of non-essential and theoretical matter the fundamentals of practical meteorology are here presented in small space with a view to their use as a text-book for special courses arranged for the army training units and naval training units. The manuscript had been prepared by the scientific staff of the United States Weather Bureau in consultation with instructors in universities and military camps.

*6x9, cloth finish boards, 150 pages, 71 line drawings and illustrations  
from cloud photographs, \$1.00*

## **Geography of Europe: A Syllabus**

It is recognized that the branches of earth science which contribute most directly to military needs are military geology and geography, and especially in the present emergency, the geography of Europe, important both in connection with military operations and with political considerations. With this in view the National Research Council has prepared this syllabus of the geography of Europe and, as in the case of the two foregoing books prepared by this council, the syllabus is recommended for military courses on this subject.

*6 1/8 x 9 1/4, paper, 25 cents.*

*Descriptive circular upon request*

**YALE UNIVERSITY PRESS**

New Haven, Connecticut  
120 College Street

New York City  
280 Madison Avenue

# Naturalists' Supplies

We carry stock for prompt delivery

- I. Collecting Utensils.
- II. Breeding Apparatus and Cages for Living Animals.
- III. Preparing and Preserving Utensils.
- IV. Cabinets, Insect Cases and Lining Material.
- V. Magnifiers, Microscopes and Accessories.
- VI. Botanists' Supplies.
- VII. Explorers' and Collectors' Camp Outfits.
- VIII. Miscellaneous Naturalists' Supplies.
- IX. Oologists' Supplies.
- X. Aquaria.
- XI. Books and Publications.
- XII. Chemicals.

K-S Museum Cabinets of Glass and Metal

*Catalogue, Circular or Information on application*

## THE KNY-SCHEERER CORPORATION

Department of Natural Science  
G. Lagai, Ph.D.

404-410 West 27th Street  
New York City, N. Y.

## Georgetown University

School of Medicine and  
Dental Department

The Sixty-fourth Session will begin September 28th, 1914, and continue eight and one-half months. Six-Year Collegiate and Medical Course leading to degrees B.S. and M.D. Practical laboratory work under special instructors, in Anatomy, Physiology, Chemistry, Histology, Pathology and Bacteriology. Ample facilities for clinical experience and practical work in hospitals of city and in the University Hospital, containing in all over 3000 beds. For particulars address

GEORGE M. KOBER, M.D.

Dean School of Medicine, 1819 Q Street

SHIRLEY W. BOWLES, D.D.S.

Dean Dental Department, 1616 Eye Street, N. W.  
Washington, D. C.

## Learn to be a Watchmaker

Bradley Polytechnic Institute

Horological Department PEORIA, ILL.

Formerly Parsons Horological Inst.

Largest and Best Watch School in America

We teach Watch Work, Jewelry, Engraving, Clock Work, Optics. Tuition reasonable. Board and rooms near school at moderate rates. Send for Catalog of Information.



This entire building used exclusively as a watch school.

## Marine Biological Laboratory

Woods Hole, Mass.

### INVESTIGATION

Entire Year

Facilities for research in Zoology, Embryology, Physiology and Botany. Seventy-six private laboratories, \$100 each for not over three months. Thirty tables are available for beginners in research who desire to work under the direction of members of the staff. The fee for such a table is \$50.00.

### INSTRUCTION

Courses of laboratory instruction with lectures are offered in Invertebrate Zoology, Embryology, Physiology and Morphology and Taxonomy of the Algae. Each course requires the full time of the student. Fee, \$50. A lecture course on the Philosophical Aspects of Biology and Allied Sciences is also offered.

### SUPPLY DEPARTMENT

Open the Entire Year

Animals and plants, preserved, living, and in embryonic stages. Preserved material of all types of animals and of Algae, Fungi, Liverworts and Mosses furnished for classwork, or for the museum. Living material furnished in season as ordered. Price lists of Zoological and Botanical materials sent on application. State which is desired. For price lists and all information regarding material, address

GEO. M. GRAY, Curator, Woods Hole, Mass.

The annual announcement will be sent on application to The Director, Marine Biological Laboratory, Woods Hole, Mass.